

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Takahiko Iriyama *et al.*

Serial No.: New

Filed: May 29, 2001 (herewith)

For: ISOTROPIC POWDERY MAGNET MATERIAL, PROCESS FOR PREPARING
AND RESIN-BONDED MAGNET

PRELIMINARY AMENDMENT

Honorable Commissioner
of Patents and Trademarks
Washington, D.C. 20231

May 29, 2001

Dear Sir:

Prior to an examination under merits, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please renumber pages 1-4 of the claims, which appear after page 35 of the specification, as pages 36-39 respectively.

Please also renumber page 1 of the Abstract of Disclosure, which appears after the claims, as page 40

Please replace the paragraph beginning at page 15, line 11, with the following rewritten paragraph:

--The magnetic alloys of the compositions shown in Table 1 were prepared. Peripheral speed of the quenching roll, thickness of the flaky magnet

powders, magnetic properties of the magnetic powders and the bonded magnets are shown in TABLE 1. Fig. 1 shows the X-ray diffraction chart using Co-K α radiation of the magnet powder prepared in Example 1, Run No. 18. Figs. 13A to 13D are electron microscope photos of quenched alloy of the same Run.--

IN THE CLAIMS:

Please rewrite Claims 4, 5-8 and 12-14 as follows:

--4. (Amended) A powdery magnet material according to claim 1, wherein up to 30 at.% of Sm is substituted with Ce.--

--5. (Amended) A powdery magnet material according to claim 1, wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.--

--6. (Amended) A powdery magnet material according to claim 1, wherein up to 35 at.% of Fe is substituted with Co.--

--7. (Amended) A powdery magnet material according to claim 1, wherein the average crystal grain size of the material is 10 nm to 0.5 μ m.--

--8. (Amended) A powdery magnet material according to claim 1, wherein the magnet powder has an intrinsic coercive force of 7 kOe or higher.--

--12. (Amended) A process for preparing according to claim 9, wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.--

--13. (Amended) A process for preparing according to claim 9, wherein the roll-quenching is carried out using a quenching roll or rolls made of a metal selected from Cu, Cr-Cu alloy, or a Be-Cu alloy.--

--14. (Amended) A bonded magnet made by processing the magnet powder according to claim 1 with a binder to the shape of a magnet.--

Please add the following new claims:

--15. A powdery magnet material according to Claim 2 wherein up to 30 at.% of Sm is substituted with Ce.

--16. A powdery magnet material according to Claim 3 wherein up to 30 at.% of Sm is substituted with Ce.

17. A powdery magnet material according to Claim 2 wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.

18. A powdery magnet material according to Claim 3 wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.

19. A process for preparing according to Claim 10 wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.

20. A process for preparing according to Claim 11 wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.--

REMARKS

The claims have been amended to remove multiple dependent claims. Early consideration and allowance of Claims 1-20 are respectfully requested.

In the event that any fees are due, the Commissioner is hereby authorized to charge the fee therefor, as well as any deficiency in the payment of the required fee(s) or credit any overpayment, to our Deposit Account No. 22-0256.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGED MADE

IN THE SPECIFICATION:

The paragraph beginning at page 15, line 11, was amended as follows:

--The magnetic alloys of the compositions shown in Table 1 were prepared. [Periphral] Peripheral speed of the quenching roll, thickness of the flaky magnet powders, magnetic properties of the magnetic powders and the bonded magnets are shown in TABLE 1. Fig. 1 shows the X-ray diffraction chart using Co-K α radiation of the magnet powder prepared in Example 1, Run No. 18. Figs. 13A to 13D are electron microscope photos of quenched alloy of the same Run.--

IN THE CLAIMS:

Claims 1, 5, and 12 were amended as follows:

--4. (Amended) A powdery magnet material according to [one of claims 1 to 3] claim 1, wherein up to 30 at.% of Sm is substituted with Ce.--

--5. (Amended) A powdery magnet material according to [one of claims 1 to 3] claim 1, wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.--

--6. (Amended) A powdery magnet material according to [one of claims 1 to 5] claim 1, wherein up to 35 at.% of Fe is substituted with Co.--

--7. (Amended) A powdery magnet material according to [one of claims 1 to 6] claim 1, wherein the average crystal grain size of the material is 10 nm to 0.5 μm .--

--8. (Amended) A powdery magnet material according to [one of claims 1 to 7] claim 1, wherein the magnet powder has an intrinsic coercive force of 7 kOe or higher .--

--12. (Amended) A process for preparing according to [one of claims 9 to 12] claim 9, wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.--

--13. (Amended) A process for preparing according to [one of claims 9 to 12] claim 9, wherein the roll-quenching is carried out using a quenching roll or rolls made of a metal selected from Cu, Cr-Cu alloy, or a Be-Cu alloy.--

--14. (Amended) A bonded magnet made by processing the magnet powder according to [one of claims 1 to 8] claim 1 with a binder to the shape of a magnet.--